

Beliefs About Control in the Physician-patient Relationship

Effect on Communication in Medical Encounters

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OBJECTIVES: Effective communication is a critical component of quality health care, and to improve it we must understand its dynamics. This investigation examined the extent to which physicians' and patients' preferences for control in their relationship (e.g., shared control vs doctor control) were related to their communications styles and adaptations (i.e., how they responded to the communication of the other participant).

DESIGN: Stratified case-controlled study.

PATIENTS/PARTICIPANTS: Twenty family medicine and internal medicine physicians and 135 patients.

MEASUREMENTS: Based on scores from the Patient-Practitioner Orientation Scale, 10 patient-centered physicians (5 male, 5 female) and 10 doctor-centered physicians (5 male, 5 female) each interacted with 5 to 8 patients, roughly half of whom preferred shared control and the other half of whom were oriented toward doctor control. Audiotapes of 135 consultations were coded for behaviors indicative of physician partnership building and active patient participation.

MAIN RESULTS: Patients who preferred shared control were more active participants (i.e., expressed more opinions, concerns, and questions) than were patients oriented toward doctor control. Physicians' beliefs about control were not related to their use of partnership building. However, physicians did use more partnership building with male patients. Not only were active patient participation and physician partnership building mutually predictive of each other, but also approximately 14% of patient participation was prompted by physician partnership building and 33% of physician partnership building was in response to active patient participation.

CONCLUSIONS: Communication in medical encounters is influenced by the physician's and patient's beliefs about control in their relationship as well as by one another's behavior. The relationship between physicians' partnership building and active patient participation is one of mutual influence such that increases in one often lead to increases in the other.

KEY WORDS: physician-patient communication; patient participation; control; gender.

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The way in which health care providers and patients communicate with one another can have a significant effect on quality of care and health outcomes. Patients often are more satisfied with care, gain a better understanding of their health conditions and treatment options, are more strongly committed to therapeutic regimens, and even experience greater health improvement when they are more actively involved in medical encounters and when their physicians are more informative, supportive, and take into account the patient's perspective on health.¹⁻⁵ Although few would argue with the claim that quality of care in part depends on the quality of physician-patient communication, researchers and clinicians still know little about the dynamics of communication process in medical consultations.

We tackle these issues by adopting the perspective that, like other forms of social interaction, what unfolds during a particular medical consultation is in part a function of personal influences (e.g., the physician's and patient's individual communication styles) and in part a function of mutual influence (e.g., how each responds to the other's communicative actions).^{5,6} In this investigation, we examined personal and mutual influence on 2 sets of behaviors that are important indicators of patient-centered care,^{7,8} active patient participation (i.e., asking questions, stating opinions, expressing concerns) and physician partnership building (i.e., utterances that encourage, support, and accommodate patient involvement).

Traditionally, researchers have studied physicians' and patients' styles of communicating with respect to personal and social attributes such as gender, ethnicity, personality, and education, to name a few.⁹⁻¹² While the study of sociodemographic influences on physician-patient communication is a worthy undertaking, more work needs to examine communication as it relates to doctors' and patients' beliefs about health care. A major contribution of the present study was to investigate how physicians' and patients' expectations for their relationship affect their communication with one another. We propose that one's orientation toward control in the doctor-patient relationship will be an important determinant of these patterns of communication.

Preferences for control can be placed on a continuum. At one end are those physicians and patients who prefer the more traditional doctor-patient relationship,

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one characterized by a powerful physician, an acquiescing patient, and a focus on disease and bodily functioning. At the other end is the consumerist perspective where the patient assumes control of health care and the physician serves as a consultant or advisor.⁴ We predict that physicians oriented toward sharing control with patients will engage in more partnership building than will physicians oriented toward doctor control. For example, 2 studies found that women and younger doctors self-reported more patient-centered orientations than did male and older physicians.^{13,14} This may explain in part why female physicians tend to use more partnership statements and other forms of patient-centered behavior than do male doctors.^{9,12,15}

Second, we predict that, compared to patients oriented toward doctor control, those preferring shared control will be more active participants, particularly with respect to asking questions, expressing concerns, and offering opinions. Patients with preferences for shared control and involvement in decision-making tend to be female, more educated, and middle-aged.^{13,16–18} These same patients also are generally more expressive and assertive in medical encounters than are male, less educated, and elderly patients.^{10–12,19}

However, because the interactants must cooperate and coordinate their responses to create a coherent and effective interaction, physician-patient communication is characterized also by mutual influence. That is, the communicative actions of one can significantly affect the response of the other. For example, a passive and uninvolved patient often becomes more participatory after the doctor has explicitly encouraged and shown interest in the patient's views.^{10,11,20,21} Conversely, prompted by a patient who asks questions and expresses concerns, a physician (even one with a controlling communication style) often will spend more time providing information and discussing issues raised by the patient because the doctor has been alerted to the patient's needs or because the doctor feels obligated to address issues of concern to the patient.^{5,10} Thus, a third hypothesis is that physician partnership building and active patients participation will have a reciprocal relationship such that increases in one lead to increases in the other.

Finally, high levels of partnership building and active patient participation should characterize a consultation in which both doctor and patient are patient-centered, whereas few of these behaviors may occur when both physician and patient prefer doctor control. However, what happens when a doctor-centered physician interacts with a patient-centered patient, or vice versa? Thus, a final research question examines the effect of relational congruence on physician-patient communication.

METHODS

Research Setting and Participants

The data in this study were collected as part of the Physician Patient Communication Project in the Sacra-

mento, California area.^{16,22} The physicians and patients were affiliated with either the University of California, Davis Medical Group (UCDMG) or Kaiser Permanente. Physicians in family medicine, internal medicine, and cardiology, and who practiced at least 20 hours per week were invited to participate in the study. A combination of recruiting strategies was used including referrals from the medical staff, personal contact, and mail. A total of 45 physicians volunteered (16 in family medicine, 18 in internal medicine, and 11 in cardiology) to participate in the original study with 22 from UCDMG and 23 from Kaiser.

Patients eligible for that study included adult, English-speaking patients of the participating physicians and who were at least "somewhat concerned" about their health. Being concerned about a health problem was considered important because beliefs about medical care may be particularly pertinent when patients are at least somewhat worried about a health issue.²³ Patients were contacted 1 to 2 days before their appointment and screened for eligibility and interest in participating. During the 11-month enrollment period of the original study, 2,606 telephone contacts were made. Of these, 677 patients (26%) declined to participate and another 737 (28%) were deemed ineligible primarily because they had no significant health concern. Of the 1,332 eligible consenting patients, 1,071 (80%) completed screening forms, and 909 (68%) completed questionnaires at the scheduled visit.

Assessing Provider-patient Relational Orientation

Krupat and colleagues^{13,16,24} have developed a brief, reliable self-report measure, the Patient-Practitioner Orientation Scale (PPOS), to assess clinicians' and patients' orientations toward control in their relationship. These orientations are relatively stable sets of personal beliefs and preferences about the physician-patient relationship. Lower scores reflect an orientation toward a more doctor-centered relationship (high doctor control, focus on biomedical issues) whereas higher scores indicate preferences for a more patient-centered relationship (sharing control, focus on the whole person). In this study, we used the 9-item Sharing subscale of the PPOS (see Appendix A). The Sharing scale assesses beliefs specifically related to sharing information and control along a shared control-doctor control continuum. Responses are scaled using a 6-point Likert scale anchored by "strongly agree" and "strongly disagree." Previous research has shown that the PPOS has good reliability ($\alpha = 0.75$ to 0.88) and validity.^{13,14,24}

Physicians completed the PPOS scale prior to seeing any patients enrolled in the study. Eligible patients filled out the measure at the end of the screening interview but prior to their visit with the physician. The instructions, items, and response options for patients were identical to those for physicians. After the visit, patients provided basic demographic and personal information as well as completed other self-report measures pertinent to the original study.

Research Design

Because we were interested in primary care consultations, we selected only from those physicians ($n = 34$) whose practice was internal medicine or family practice. In addition, we sought to balance patient and physician gender within the research design, given that both communication behavior and beliefs about control in the physician-patient relationship may vary by physician and patient gender and by the gender composition of the encounter.¹²⁻¹⁴

Because we wanted to compare the communication of physicians who differed significantly in their beliefs about control, we first selected the 10 physicians who scored highest on the PPOS measure. Fortuitously, these 10 were 5 males and 5 females. To get a gender match for physicians oriented toward doctor control, we had to sample the 13 lowest PPOS scoring doctors to get a sample of 5 males and 5 females. The scores for the high PPOS physicians ranged from 4.89 to 5.44 with a mean of 5.09, which was significantly higher ($F = 70.08$, $P < .001$) than the scores of the low PPOS physicians (mean, 3.71; range, 2.67-4.22).

In the original data set, each physician had consulted with at least 12 to 20 patients. To get high and low PPOS patients, we attempted to select for each physician the 2 male and 2 female patients with the lowest PPOS scores and the 2 males and 2 females with the highest PPOS scores. This created an initial sample of 160 consultations: 20 physicians each interacting with 8 patients. However, because of audio recording problems (background noise that made utterances unintelligible, voices too faint to comprehend, recording malfunction), other family members in the room who actively participated in the discussions, and incomplete consultations (in some cases, the physician and patient left the exam room and did not return), a total of 135 recordings were suitable for verbal behavior coding.

In the final sample, each physician interacted with 5 to 8 patients, at least 2 of whom scored high on the PPOS measure and at least 2 who scored low. The mean PPOS score for patients preferring shared control was 5.33 (range 4.39-5.54), which was significantly higher ($F = 78.05$, $P < .001$) than the mean score (3.07) for the doctor-control patient group (range 2.00-4.33).

Verbal Behavior Coding

Operational Definitions and Coding. Patient participation and physician partnership building were coded from audiotapes using a system developed by Street and colleagues. Street's coding system has been used in other studies investigating the relationship of patient involvement to physician communication with coding reliabilities ranging from 0.65 to 0.97.^{10,11,25,26}

Because of their potential to influence a doctor's behavior and medical decisions, 3 types of speech acts were coded as active patient participation: question-asking, assertive responses, and expressions of concern. Physi-

cians' partnership building includes verbal acts that encourage patients to express their opinions, ask questions, talk about their feelings, and participate in decision making.^{4,5} Partnership building also includes responses that affirm or accommodate the patient's beliefs, opinions, preferences, and requests. The Appendix provides operational definitions and examples of active patient participation and physician partnership-building behaviors.

Compared to other types of speech acts (e.g., information giving by the patient, question asking and information giving by the physician), verbal acts of active patient participation and physician partnership building occur with relative infrequency (<10% of patient and physician utterances, respectively).^{10,25,27} Thus, to code behaviors of interest, transcripts of the entire consultation were not necessary. Rather, coders used a procedure where they listened closely to the audio recording to identify targeted behaviors. Once they perceived that such a behavior occurred (e.g., a patient's question, a physician's partnership statement), coders then transcribed conversational turns both before and after the speech act(s) of interest. After transcribing that portion of the dialog, the coders divided the discourse into "utterances," the oral analogs of a simple sentence. The coder then listened to that part of the tape again and, using the transcribed segment, placed the utterances into the relevant categories of patient participation and physician partnership building.

Two coders who were unaware of the study's hypotheses were trained in the coding method. To establish reliability, both coders coded a subset of the consultations ($n = 15$) that were fully transcribed so that assessments could be made of coder agreement on unitizing utterances (that is, identifying a speech act for coding) and on categorizing utterances into particular categories. Reliability (Cohen's κ) was sufficient for unitizing utterances (0.88) and for the patient's question-asking (0.91), assertive utterances (0.71), expressions of concern (0.77), and for the physician's partnership building (0.81). The 2 coders coded the remaining interactions individually and independently.

Verbal Behavior Measures. The frequency of the physician's partnership-building responses and the sum of the patient's active participation behaviors served as the primary communication measures in the analyses. However, to provide descriptive information on the interactive relationship between active patient participation and physician partnership building, we created a proportional measure of prompted patient participation by dividing the number of active patient participation behaviors immediately preceded by physician partnership building by the total number of participation behaviors for that interaction. The higher the proportion, the more the patient's active participation was in response to or prompted by the doctor's partnership building. Similarly, prompted partnership building was calculated as the ratio of a physician's partnering statements that were

immediately preceded by active patient participation responses to the total number of partnership-building utterances.

Data Analysis

We hypothesized that: 1) physicians oriented toward shared control use more partnership building than physicians preferring doctor control; 2) patients wanting shared control are more active participants than patients preferring doctor control; and 3) active patient participation and physician partnership building mutually influence one another. Since patients were nested within physicians, we tested the hypotheses using 2 mixed random-fixed effects models (1 for physician partnership building and 1 for patient participation).²⁸ For physician partnership building, the predictors included the individual physician as the random effect, the patient's active participation, the physician's orientation toward control, the patient's orientation toward control, and the interaction between physician and patient control orientations. To control for potentially confounding demographic variables, the patient's age, education, gender, income, ethnicity, and the physician's gender also were included as predictors. The model predicting patient participation was similar except that physician partnership building was the covariate. The physician orientation \times patient orientation interaction was included in both models because it assesses the effect of relational congruence and incongruence on patterns of communication.

RESULTS

Overview

Table 1 presents demographic and other characteristics of the sample. Consistent with the larger sample¹⁶ from which these data were gathered, patients preferring shared control were younger ($F = 10.92$, $P < .01$), more educated ($F = 46.25$, $P < .001$), and had higher income ($F = 4.99$,

$P < .05$) than did patients oriented toward doctor control. The majority of the sample was white (72%), and the remaining patients were represented by Latinos (10%), African Americans (6%), Asian Americans/Pacific Islanders (4%), Native Americans (4%), and other (3%). Patients' demographic characteristics did not differ between physicians having either shared-control and doctor-control orientations.

Patients averaged just over 11 active participation utterances per consultation (range 1–62), a number that is comparable to other studies using this type of coding system.^{9,25} As shown in Table 2, active patient participation was not related to the patient's ethnicity, education, and income or to the physician's gender. However, female patients tended to be more active participants (mean, 13.53 utterances) than were males (9.06 utterances). Although there was a trend ($P < .06$) for older patients to participate more than younger patients, this may be a statistical artifact since patient age was confounded with the patient's orientation toward control and since the raw correlation between participation and age was small ($r = .10$). Participation did not vary as a function of the individual physician.

Physicians on average produced 3.17 partnership statements per consultation (range 0–15). The random effect associated with individual physicians' use of partnership building only approached significance ($P = .12$). As shown in Table 3, physician partnership building was not related to the physician's gender or to the patient's age, education, income, and ethnicity. However, physician partnership building was related to the patient's gender as doctors produced more partnership statements with male (mean, 3.67; SE, 0.45) than with female patients (mean, 2.62; SE, 0.42).

The Effects of Mutual Influence and Orientations Toward Control

As expected, active patient participation and physician partnership building were significantly correlated ($r = .58$,

Table 1. Characteristics of the Sample Stratified by Preference for Doctor Versus Shared Control ($N = 135$)

	Doctor Control Physicians ($N = 10$)		Shared Control Physicians ($N = 10$)	
	Doctor Control Patients	Shared Control Patients	Doctor Control Patients	Shared Control Patients
<i>n</i>	36	35	34	30
Female, %	50	57	50	60
White, %	75	80	56	80
Mean age, y	64.2	53.6	58.1	54.5
Education, <i>n</i>				
High school or less	19	6	20	1
Some college/Associate's degree	13	16	11	13
BA, BS, postgraduate	4	13	3	16
Household income, <i>n</i>				
<\$20K	11	4	9	1
\$20–60K	19	20	20	18
>\$60K	6	11	5	11

Table 2. Summary of Multivariate Model Predicting Active Patient Participation (N = 135)

Variables	Unstandardized Regression Coefficient (β)*	SE	Standardized Regression Coefficient (β)†	P Value
Physician partnership building	1.79	0.22	0.58	<.001
Patient relational orientation‡	-5.13	2.51	-0.23	.043
Doctor relational orientation‡	-0.85	2.34	-0.04	.716
Patient × doctor relational orientation	1.75	3.09	0.06	.573
Patient gender§	-4.54	1.55	-0.20	.004
Physician gender§	-1.85	1.72	-0.08	.283
Patient age	0.12	0.06	-0.15	.056
Patient education	0.17	1.22	0.01	.889
Household income¶	0.14	0.42	0.02	.747
Patient ethnicity#	-1.92	1.84	-0.08	.298

* The unstandardized regression coefficient represents the change in the dependent variable for each unit increase in the independent variable.

† The standardized regression coefficient compares the magnitudes of the coefficients and indicates the relative importance of each variable in the model.

‡ 1 = oriented toward doctor control, 0 = oriented toward shared control.

§ 1 = male, 0 = female.

|| 1 = high school or less, 2 = some college or associate's degree, 3 = bachelor's or graduate degree.

¶ 1 = less than \$10K, 2 = \$10–20K, 3 = \$20–40K, 4 = \$40–60K, 5 = \$60–80K, 6 = \$80–100K, 7 = over \$100K.

1 = white, 2 = nonwhite.

$P < .001$) and mutually predictive of one another in the statistical models (see Tables 2 and 3). In addition, approximately 14% of the patient's active participation was prompted by the physician's partnership-building efforts. Roughly one-third of physicians' partnership building followed a patient's opinion, concern, or question. These findings support the notion that partnership building and patient participation often have a relationship of mutual influence such that the occurrence of one can elicit the other.

With respect to orientation toward the doctor-patient relationship, patients preferring shared control more often

asked questions, expressed concerns, and were assertive (mean, 13.63 utterances; SE, 1.28) than were patients oriented toward doctor control (mean, 8.97; SE, 1.22; see Table 2). Contrary to expectations, however, physicians oriented toward shared control did not use partnership building (mean, 3.22 utterances; SE, .50) significantly more than did physicians preferring doctor control (mean, 3.08; SE, .49). The interaction between physician and patient relational orientation (i.e., the congruence effect) was not statistically significant (see Tables 2 and 3). In other words, physicians and patients who were congruent in their relational orientations (i.e., both preferring doctor

Table 3. Summary of Multivariate Model Predicting Physician Partnership Building (N = 135)

Variables	Unstandardized Regression Coefficient (β)*	SE	Standardized Regression Coefficient (β)†	P Value
Active patient participation	0.18	0.02	0.56	<.001
Patient relational orientation‡	0.89	0.82	0.12	.277
Doctor relational orientation‡	-0.28	0.85	-0.04	.647
Patient × doctor relational orientation	0.21	0.99	0.03	.841
Patient gender§	1.11	0.51	0.15	.031
Physician gender§	0.12	0.69	0.02	.865
Patient age	-0.01	0.02	-0.04	.593
Patient education	0.09	0.39	0.02	.811
Household income¶	-0.13	0.14	-0.07	.336
Patient ethnicity#	0.68	0.61	0.08	.262

* The unstandardized regression coefficient represents the change in the dependent variable for each unit increase in the independent variable.

† The standardized regression coefficient compares the magnitudes of the coefficients and indicates the relative importance of each variable in the model.

‡ 1 = orientation toward doctor control, 0 = orientation toward shared control.

§ 1 = male, 0 = female.

|| 1 = high school or less, 2 = some college or associate's degree, 3 = bachelor's or graduate degree.

¶ 1 = less than \$10K, 2 = \$10–20K, 3 = \$20–40K, 4 = \$40–60K, 5 = \$60–80K, 6 = \$80–100K, 7 = over \$100K.

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control or shared control) did not use partnership building or active participation to a greater or lesser degree than did relationally incongruent pairs.

DISCUSSION

As predicted, patients oriented toward shared control in the doctor-patient relationship asked more questions, expressed more concerns, and were more assertive than were patients preferring doctor control. However, physicians' beliefs about control were not related to their use of partnership building. This may be due to the smaller number of physicians ($n = 20$) compared to the number of patients ($n = 135$), or because we balanced physicians' gender with their beliefs about control. As mentioned earlier, women health care providers tend to use more partnership statements than do men^{12,15} and they generally have a stronger orientation toward sharing control.^{13,14} By balancing physician gender with orientation toward control, our research design may have nullified the potential influences of both on physician behavior.

Second, consistent with other investigations,^{10,11,20,21} our finding of a reciprocal relationship between partnership building and patient participation supports the notion that communication in medical encounters is a process of mutual influence. Although some patients, such as those preferring shared control, are generally inclined to be actively involved in the consultation, other patients may need encouragement. In this study, approximately 14% of the active patient participation occurred only after being prompted by the physician's partnership efforts. Conversely, partnership building also serves to affirm and support patient involvement given that approximately one-third of the partnership statements were in response to the patient's expression of an opinion, concern, or question.

Finally, although congruence in physicians' and patients' orientations toward control have been linked to outcomes such as patient satisfaction and intent to comply,^{13,16} we failed to find a relationship between relational congruence and physician-patient communication. Apparently, associations between congruence and the communication process are more complex than the simple notion that "congruence is good and noncongruence is bad." More research is needed to better understand what impact, if any, relational congruence has on communication in medical encounters.

Although our results provided some support for our hypotheses, this investigation had several limitations. First, our focus on partnership building alone may have been too narrow for assessing how a physician's communication is related to his or her orientation toward control. We would have had higher scores of partnering behavior had we also assessed other "patient-centered" responses such as paraphrasing, checking for understanding, vocal back-channels, statements of counseling and support, and nonverbal behaviors indicative of attentive listening.^{7,8,29} Future research on physicians' orientation to the doctor-

patient relationship should examine a broader range of behaviors that might be considered patient-centered.

Another limitation is the generalizability of our findings. Approximately 25% of the patients refused to participate and, of those who did, almost 30% failed to fully complete the questionnaires. In addition, we limited our sample to the patients of doctors scoring at the extremes of the PPOS scale. Future research should determine whether a larger sample would replicate our findings as well as provide greater statistical power for testing the effects of a physician's orientation toward control on his or her communication with patients.

A third limitation of this and related studies concerns the assessment of communication as a process of mutual influence. Correlational analyses identify covariation, but only imply mutual influence. Our effort to code the sequential connections between partnership building and patient participation behaviors is arguably a step in the right direction. However, in addition to coding how often partnership building elicited patient involvement, we also should assess how often it failed to do so. Such a measure would provide insight into the types of patient-centered behaviors that more effectively elicit patient involvement in care.

Limitations notwithstanding, however, the results of this investigation have several important implications for clinical practice. First, within any group of physicians or patients, individuals will differ in their beliefs about control in the physician-patient relationship. Although the PPOS measure is relatively brief, it may not be feasible for physicians to use it in their clinical practices. Instead, physicians could tap into patients' expectations for their relationship with the doctor by using simple partnership-building tactics such as "Do you have any other issues that you would like to discuss?" or "Do you have any preferences or concerns about how we should treat this?" The patient's response to questions like these would provide information that the doctor could then use to formulate his or her own communication strategies for the consultation.

Second, our findings of mutual influence between partnership building and patient participation indicate that both patients and physicians can use their own communication to help the other be a more effective communicator. For example, if they are not receiving sufficient information, support, and personalized care, patients can engage in simple, but powerful communication tactics (asking questions, expressing concerns, offering opinions) that often will elicit more of these resources from physicians.^{5,10} A number of patient activation programs have been developed using a variety of educational methods including booklets,³⁰ videotapes,³¹ multimedia programs,³² and presentations by nurses and staff.³³ These interventions often are quite effective because patients may need little more than encouragement, a belief in the legitimacy of patient involvement, and a few communicative strategies (e.g., writing down questions and concerns, rehearsing) to increase their participation in the consultation.³⁴

Our findings also show that physicians can use partnership statements to stimulate greater participation from passive or uninvolved patients.^{11,20,21} It is important to note, however, that partnership building and other patient-centered behaviors are communication skills that may require training to be used most successfully. For example, despite the fact that physicians in this study used more partnership statements with males, these patients still tended to participate less than female patients. To help physicians learn how to use patient-centered responses more effectively, training programs need to be intensive, provide opportunities for practice and feedback on performance, present role models, provide follow-up assessments and, importantly, have institutional support and incentives promoting the value of effective communication with patients.³⁴⁻³⁶

Finally, what remains unanswered in this and related research is the ethical tension of whether patient-centeredness represents a partnership with the patient or an accommodation to the patient's expectations, even when these expectations call for high doctor control and a more narrow focus on biomedical health issues. However, apart from the physician's and patient's relational orientations, a case can be made for the value of patient-centered communication and for greater patient participation in the consultation. Even if a patient wants the physician to make the medical decision, he or she may still have questions or concerns that should be expressed and brought to the doctor's attention. This could contribute to better treatment plans in light of research indicating that the physicians' facilitation of the patient's expression of concerns contributes to patients feeling understood and to physician-patient agreement on the nature of the patient's problem.^{29,37}

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APPENDIX A

Operational Definitions of the Research Measures

I. Items in the Sharing Subscale of the Provider-Patient Orientation Scale (answered on 6-point Likert scale)

1. The doctor is the one who should decide what gets talked about during a visit.
2. It is often best for patients if they do not have a full explanation of their medical condition.
3. Patients should rely on their doctors' knowledge and not try to find out about their conditions on their own.
4. Many patients continue asking questions even though they are not learning anything new.
5. Patients should be treated as if they were partners with the doctor, equal in power and status.
6. When patients disagree with their doctor, this is a sign that the doctor does not have the patient's trust and respect.

7. Most patients want to get in and out of the doctor's office as quickly as possible.
8. The patients must always be aware that the doctor is in charge.
9. When patients look up medical information on their own, this usually confuses more than it helps.

II. Active Patient Communication Behaviors²⁵

1. Asking questions—Utterances in interrogative form intended to seek information and clarification (e.g., "What does that medicine do?," "Why does it hurt when I lift my arm?," and "When should I get my next check-up?").
2. Expressions of concern—Utterances in which the patient expresses worry, anxiety, fear, anger, frustration and other forms of negative affect or emotions (e.g., "I'm worried about cancer given my family history," "I'm so tired of this hurting all the time!," and "I hated it when my employer switched health plans.").
3. Assertive responses—Utterances in which the patient expresses his or her rights, beliefs, interests, and desires as in offering an opinion, making recommendations, disagreeing, or interrupting (e.g., "I would like to see if it gets any worse before I think about surgery", "Could I have a note for my employer?", and "Before I go, there's one other thing I want to talk about.").

III. Physician Partnership Building

Utterances that solicit, encourage, or affirm patients' efforts to express their opinions, ask questions, talk about their feelings, and participate in decision making (e.g., "What do you think about that?," "Is that something you would like to consider?," and "Sure, that'll be fine" [in response to a patient's request]).

REFERENCES

1. Stewart M. Effective physician-patient communication and health outcomes: a review. *Can Med J*. 1995;152:1423-33.
2. Rost KM, Carter W, Inui T. Introduction of information during the initial medical visit: consequences for patient follow-through with physician recommendations for medication. *Soc Sci Med*. 1989;28:315-21.
3. Kaplan SH, Greenfield S, Ware JE Jr. Assessing the effects of physician-patient interactions on the outcomes of chronic disease. *Med Care*. 1989;27(suppl):110-27.
4. Roter DL, Hall JA. *Doctors Talking to Patients/Patients Talking to Doctors*. Westport, Conn: Auburn House; 1993.
5. Street RL Jr. Active patients as powerful communicators. In: Robinson WP, Giles H, eds. *The New Handbook of Language and Social Psychology*. Chichester, UK: John Wiley; 2001:541-60.
6. Giles H, Street RL Jr. Communicator characteristics and behavior. In: Miller GR, Knapp M, eds. *Handbook of Interpersonal Communication*, 2nd ed. Newbury Park, Calif: Sage Publications; 1994: 103-61.
7. Levenstein JH, Brown JB, Weston WW, Stewart M, McCracken EC, McWhinney I. Patient-centered clinical interviewing. In: Stewart M, Roter D, eds. *Communicating with Medical Patients*. Newbury Park, Calif: Sage Publications; 1989:107-20.
8. Stewart M, Brown JB, Weston WW, McWhinney IR, McWilliam CL, Freeman TR. *Patient-centered Medicine: Transforming the Clinical Method*. Thousand Oaks, Calif: Sage Publications; 1995.
9. Roter DL, Stewart M, Putnam SM, Lipkin M, Stiles W, Inui TS. Communication patterns of primary care physicians. *JAMA*. 1997; 227:350-6.
10. Street RL Jr. Information-giving in medical consultations: the influence of patients' communicative styles and personal characteristics. *Soc Sci Med*. 1991;32:541-8.
11. Street RL Jr. Communicative styles and adaptations in physician-parent consultations. *Soc Sci Med*. 1992;34:1155-63.

12. Roter DL, Hall JA, Aoki Y. Physician gender effects in medical communication: a meta-analytic review. *JAMA*. 2002;288:756-64.
13. Krupat E, Rosenkranz SL, Yeager CM, Barnard K, Putnam SM, Inui TS. The practice orientations of physicians and patients: the effect of doctor-patient congruence on satisfaction. *Patient Educ Couns*. 2000;39:49-59.
14. Haidet P, Dains JE, Paterniti DA, Chang T, Tseng E, Rogers JC. Medical students' attitudes toward patient-centered care and standardized patients' perceptions of humanism: a link between attitudes and outcomes. *Acad Med*. 2002;76(10 suppl):42-4.
15. Roter D, Lipkin M, Korgaard A. Sex differences in patients' and physicians' communication during primary care medical visits. *Med Care*. 1991;29:1083-93.
16. Krupat E, Bell RA, Kravitz RL, Thom D, Azari R. When physician and patients think alike: patient-centered beliefs and their impact on satisfaction and trust. *J Fam Pract*. 2001;50:1057-62.
17. Degner LF, Sloan J. A. Decision-making during serious illness: what role do patients really want to play? *J Clin Epidemiol*. 1992;45: 941-50.
18. Benbassat J, Tidhar M. Patients' preferences for participation in clinical decision-making: a review of published surveys. *Behav Med*. 1998;24:81-8.
19. Beisecker AE, Beisecker TD. Patient information-seeking behaviors when communicating with doctors. *Med Care*. 1990;28:19-28.
20. Cox A. Eliciting patients' feelings. In: Stewart M, Roter D, eds. *Communicating with Medical Patients*. Newbury Park, Calif: Sage Publications; 1989:99-106.
21. Wissow LS, Roter D, Wilson MEH. Pediatrician interview style and mothers' disclosure of psychosocial issues. *Pediatrics*. 1994;93: 289-95.
22. Kravitz RL, Bell RA, Azari R, Krupat E, Kelly-Reif S, Thom D. Request fulfillment in office practice: antecedent and relationships to outcomes. *Med Care*. 2002;40:38-51.
23. Ben-Sira Z. Affective and instrumental components of the physician patient relationship: an additional dimension of interaction theory. *J Health Soc Behav*. 1980;21:170-80.
24. Krupat E, Putnam SM, Yeager C. The fit between doctors and patients: can it be measured? *J Gen Intern Med*. 1996;11(suppl): 134.
25. Street RL Jr, Millay B. Analyzing patient participation in medical encounters. *Health Commun*. 2001;13:61-73.
26. Street RL Jr, Piziak V, Carpentier W, et al. Provider-patient communication and metabolic control. *Diabetes Care*. 1993;16: 714-21.
27. Roter DL, Hall JA, Katz NR. Patient-physician communication: a descriptive summary of the literature. *Patient Educ Couns*. 1998; 12:99-119.
28. Singer J. Using SAS PROC MIXED to fit multilevel models, hierarchical models, and individual growth models. *J Educational Behav Stat*. 1998;24:323-55.
29. Henbest RJ, Stewart MA. Patient-centeredness in the consultation 2: does it really make a difference? *Fam Pract*. 1990;7:28-33.
30. McGee DS, Cegala DJ. Patient communication skills training for improved communication competence in the primary care medical consultation. *J Applied Commun Res*. 1998;26:412-30.
31. Anderson LA, DeVellis BM, DeVellis RF. Effects of modeling on patient communication, satisfaction, and knowledge. *Med Care*. 1987;25:1044-56.
32. Street RL Jr, Voigt B, Geyer C, Manning T, Swanson G. Increasing patient involvement in deciding treatment for early breast cancer. *Cancer*. 1995;76:2275-85.
33. Greenfield S, Kaplan S, Ware JE Jr. Expanding patient involvement in care. *Ann Intern Med*. 1985;102:520-8.
34. Street RL Jr. Interpersonal communication skills in health care contexts. In: Greene JO, Burleson BR, eds. *Handbook of Communication and Social Interaction Skills*. Mahwah, NJ: Erlbaum; 2003:909-33.
35. Levinson W, Roter D. The effects of two continuing medical education programs on communication skills of practicing primary care physicians. *J Gen Intern Med*. 1993;8:318-24.
36. Roter DL, Hall JA, Kern DE, Barker LR, Cole KA, Roca RP. Improving physicians' interviewing skills and reducing patients' emotional distress: a randomized clinical trial. *Arch Intern Med*. 1995;155:1877-84.
37. Henbest RJ, Fehrsen GS. Patient-centeredness: is it applicable outside the West? *Fam Pract*. 1992;9:311-7.